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THE FIRST REPORT OF THE JOINT STEERING COMMITTEE ON HAZARDOUS SUBSTANCES IN THE WORKPLACE DECEMBER 1, 1987 TO MARCH 31, 1990

Ontario Ministry of Labour

Occupational Health and Safety Division


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JOINT STEERING COMMITTEE ON HAZARDOUS SUBSTANCES IN THE WORKPLACE

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INTRODUCTION

In November 1987, the Minister of Labour established the Joint Steering Committee on Hazardous Substances in the Workplace. The Committee, which consists of an equal number of labour and employer representatives, was established to develop and review regulations designed to control worker exposure to hazardous substances.

This report, which is the first report of the Joint Steering Committee, gives an account of the Committee's activities and achievements to date.

The Joint Steering Committee was created as a result of discontent among organized labour and some employer groups in Ontario resulting in an effort to construct a more effective development process for hazardous substance regulations than the process the Ministry had been using. Since the Ministry began developing designated substance regulations in 1980 until 1987, when the Joint Steering Committee was established, a total of nineteen substances had been proposed for designation and twelve regulations for eleven substances had been completed. The last designated substance regulation, the Regulation respecting Ethylene Oxide, took effect March 24, 1987. A more general regulation, the Regulation respecting Control of Exposure to Biological or Chemical Agents (O. Reg. 654/86) has been in effect since December 6, 1986. While the Ministry originally believed the development process for designated substance regulations would take about nine months per regulation, the process was, in fact, much slower. In the end the process was taking over three years for each regulation. Both labour and management groups were also critical of the slow pace of regulation development.

Much of the delay in developing designated substance regulations was due to repetitive technical controversies and questions of scientific evidence. This was particularly true for proposed designated substances considered to be carcinogenic. It became apparent that

only if the kinds of scientific tests that should be used as evidence of the existence of various types of health hazards can be established and accepted by all parties, can the regulatory process be greatly accelerated.

The process established by the Ministry to develop the regulations involved publishing Notices of possible designation and proposed regulations with repeated requests to interested parties for the submission of written comments. Ministry officials would also meet with individual parties to discuss their concerns. The advantage of this process was that it allowed parties affected by the regulation the opportunity to present arguments to the Ministry.

The major shortcomings of the process were the delays in decision-making and the inability to resolve conflicts between competing interests or resolve the repeated technical controversies. Because the process did not allow for conflict resolution and consensus building, the Ministry was unable to build broad support for its regulatory programs for toxic substances. The Ministry and representatives of industry and organized labour focused increasing attention on the search for a solution as frustrations with the existing process mounted.

The Ministry's experience with two other initiatives provided a positive impetus for change. In the mining sector, the Mining Legislative Review Committee, a labour-employer committee funded by the Ministry, had been successful for a number of years. In addition, development of the Workplace Hazardous Materials Information System (WHMIS) proved that government, labour and employers could work together on a consensus basis to develop regulations for hazardous substances.

The Ministry held meetings in September and October 1987 with representatives of both employers and organized labour to discuss the concept of a bipartite committee for regulation development. The meetings were highly successful and, in November 1987, the Minister of Labour appointed an equal number of labour and employer

representatives to the Joint Steering Committee on Hazardous Substances in the Workplace in accordance with section 11 of the Act.

The Joint Steering Committee is a bipartite committee, consisting of nine employer representatives and nine representatives of organized labour and at the request of the parties, is chaired by the Assistant Deputy Minister of the Ministry of Labour's Occupational Health and Safety Division.

The Joint Steering Committee's mandate is to develop and review regulations made under the Act that serve to control worker exposure to hazardous substances in Ontario workplaces. This involves achieving consensus on matters such as: determining priorities for substances to be regulated; developing a process for updating the Regulation respecting Control of Exposure to Biological or Chemical Agents (O. Reg. 654/86); and examining new approaches to the regulation of toxic substances. The Joint Steering Committee will submit its decisions to the Minister of Labour for consideration. The Minister will be expected to act on the consensus decisions of the Joint Steering Committee. Should the Minister not accept a consensus recommendation of the Joint Steering Committee, the Committee will receive a full explanation within a reasonable time.

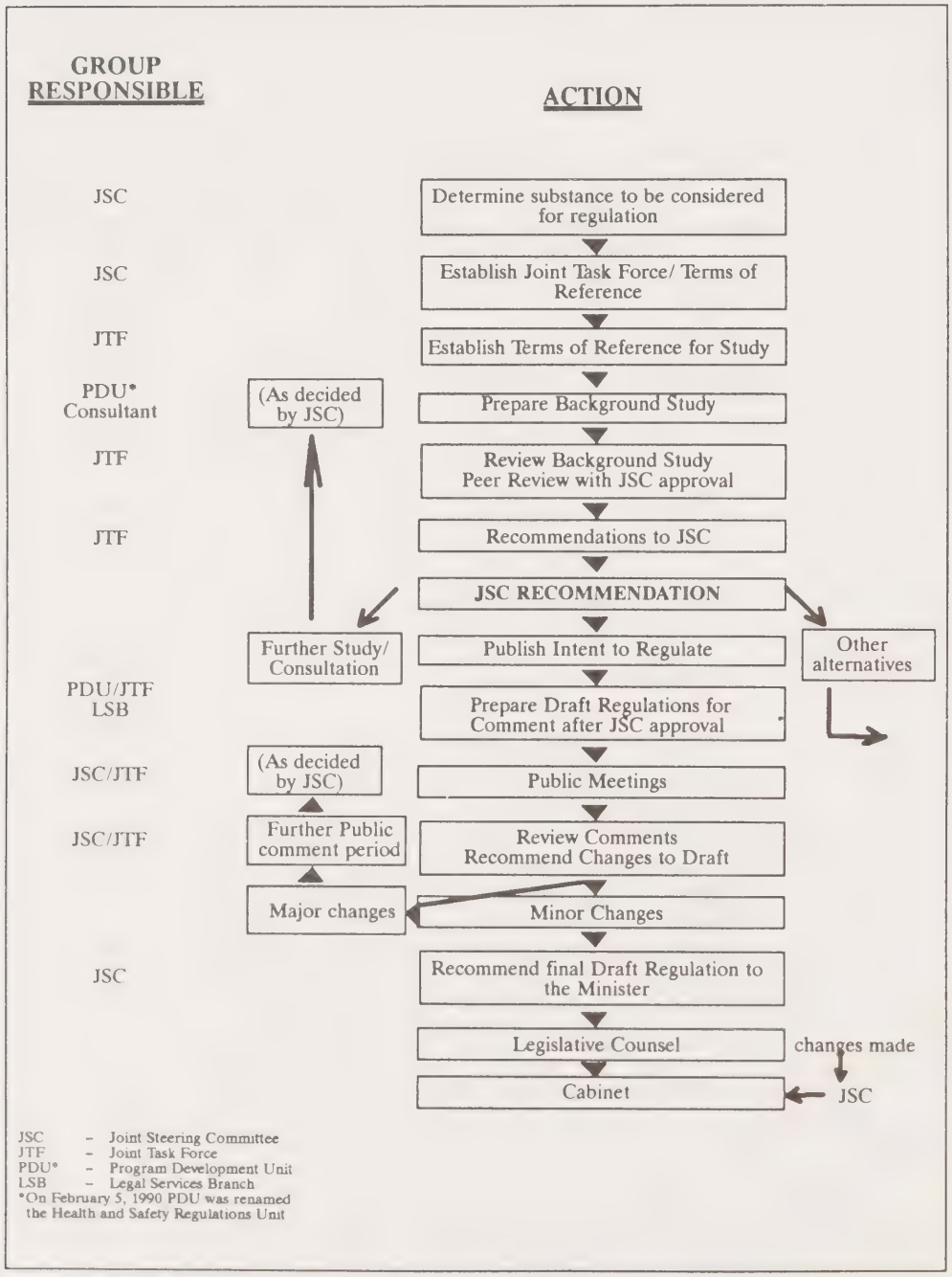
THE REPORT

In its first two years, the Joint Steering Committee has achieved a number of goals, the first being the establishment of its terms of reference. Supplementary process changes were agreed to in November 1989. The terms of reference can be found in Appendix I. The Joint Steering Committee reviewed the existing consultative process for the development of hazardous substance regulations and a more effective process was developed in March 1988. This new process is illustrated in Figure 1. A description of the process appears in Appendix II.

The Joint Steering Committee also established a communications plan to increase public awareness of the Committee and to encourage

FIGURE I

JOINT STEERING COMMITTEE ON HAZARDOUS SUBSTANCES REGULATION DEVELOPMENT PROCESS REVISED



participation in its activities. As part of this plan, a brochure, describing the Joint Steering Committee, its purpose and how people can participate in regulation development was published. Entitled "It's a Tough Job but Somebody's Got to Do It", the brochure was sent to all joint health and safety committees in Ontario.

To facilitate the work of the Joint Steering Committee, the Ministry provided funds for a researcher/analyst for each of the employer and labour groups.

In order to maintain the broadest representation of employers, the employer group established the Employer Coordinating Group (ECG) to ensure as far as possible, that the concerns of all employers were incorporated into Joint Steering Committee deliberations. The ECG represents some 36 major employer associations. The ECG meets regularly to formulate an employer position and to build employer consensus on issues pertinent to the Joint Steering Committee. In addition, the ECG holds more frequent special advisory committee meetings to discuss specific issues. There is also an annual conference which is open to all employers. In 1989, an administrative committee was established to improve administration and promote communication within the ECG.

The Labour members of the Joint Steering Committee also ensure that they represent the interest of their members. Each major affiliate of the Ontario Federation of Labour (OFL) is represented by a representative appointed by his or her union who sits on the OFL Health and Safety Committee. The Health and Safety Committee takes direction from Labour conventions and consults with both the Executive Board and the Executive Council of the OFL. Those members representing non-OFL affiliate unions consult with senior officials in their respective unions and participate in regular meetings of the Labour Caucus of the Joint Steering Committee.

Of particular importance was the Joint Steering Committee's establishment of three joint task forces designed to achieve consensus on fundamental issues related to setting standards and developing regulations for hazardous substances. These are:

1. The Regulatory Framework and Classification Task Force (established May 1988);

2. The Biomedical Surveillance Task Force (established October 1988); and

3. The Exposure Values and Limits Task Force (established October 1988).

Each task force is made up of three or four representatives from the labour and employer groups and a Ministry of Labour representative. The membership and terms of reference for each task force appear in the Appendices.

A Stage One report was received from the Exposure Values and Limits Task Force regarding time-weighted average exposure limits (see below). The report was ratified by the Joint Steering Committee.

Regulatory Framework and Classification Task Force

The objective of the Task Force is to develop a new policy framework within which regulations for the control of workers' exposure to hazardous substances in the workplace will be developed.

Since its inception, the Task Force has been in the process of developing a new generic chemical hazard regulation. Proposals for a new regulation which incorporates an assessment of worker exposure to hazardous substances and several levels of control, based on the potential hazard posed by the substance, have been discussed.

Proposals have been tabled on the scope and application of a generic regulation. The possibility of including process-specific or procedural provisions or codes of practice under certain circumstances have been considered.

Exposure Values and Limits Task Force

The objectives of the Task Force are to evaluate the scientific basis for setting exposure values and limits based on time-weighted averages (TWAs); to evaluate their effectiveness and appropriateness for the protection of worker health; and to define the process and criteria for establishing exposure values and limits for hazardous substances (including biological and physical agents) in the workplace.

The Task Force completed its first objective which is to evaluate the scientific basis for setting exposure limits based on time-weighted averages and whether they are appropriate to use to protect workers' health. The Task Force tabled a report on Stage One for consideration by the Joint Steering Committee as part of Stage One of its mandate. A copy of the report appears in Appendix V.

The Task Force began discussions on criteria to be used to establish both time-weighted average and ceiling limits and on process issues related to risk assessment and the development of new exposure limits. Also under consideration was the need for interim standards pending the comprehensive process required to develop the new exposure limits.

Biomedical Surveillance Task Force

The objective of the Task Force is to evaluate and make recommendations on the appropriateness and effectiveness of biomedical surveillance of hazardous agents as part of a regulatory program which protects the health and safety of workers.

The purpose of biomedical surveillance and the criteria for evaluating proposed biomedical surveillance programs for particular hazardous chemical agents have been explored. All parties have tabled proposals to test the criteria, using lead as the example.

APPENDICES

APPENDIX I

JOINT STEERING COMMITTEE ON HAZARDOUS SUBSTANCES IN THE WORKPLACE

TERMS OF REFERENCE

Primary Objective of the Joint Steering Committee:

To develop and review regulations for hazardous substances (including biological and physical agents) made under the **Occupational Health and Safety Act** (the Act).

Secondary Objectives of the Joint Steering Committee:

1. To ensure as far as is possible that the regulations for hazardous substances effectively minimize the risks to health and safety in all workplaces in Ontario.

2. To ensure as far as is possible that the regulations and exposure limits developed or approved by the Joint Steering Committee are acceptable to both employers and workers in Ontario.

Terms of Reference:

1. To review the current regulatory framework and make recommendations on new approaches to the regulation of hazardous substances in Ontario.

2. To advise the Minister on priorities for the development of regulations for hazardous substances.

3. To advise the Minister on policies, principles and procedures to be used in standard setting by the government and by the Joint Steering Committee.

4. To review and make recommendations to the Minister on the introduction of new substances to the schedule of O. Reg. 654/86.

5. To review and make recommendations on new or revised exposure limits for those substances listed in or added to the schedule of O. Reg. 654/86.

6. To review and make recommendations about designation of substances under the Act.

7. To advise the Minister on priorities for research and data gathering relating to the regulation of hazardous substances.

8. To make recommendations on matters referred to it by the Minister, submitted to it by interested parties or pursued by the Joint Steering Committee on its own initiative.

9. To prepare an annual report to the Minister, which shall include the Joint Steering Committee's advice and recommendations and the government's response and notice of those issues for which consensus could not be reached.

Process

1. Decisions will be by consensus rather than by voting and will be made within time limits agreed upon by the Steering Committee.

2. Matters for which no consensus can be achieved will be fully reported with explanation to the Minister of Labour.

3. The Minister of Labour will be expected to act on the consensus decisions of the Steering Committee. Should the Minister not accept a consensus recommendation of the Steering Committee, the Committee will receive a full explanation within a reasonable time.

4. The Minister of Labour will provide adequate resources for administrative support, project management, research and legal counsel.

5. Terms of reference for any external contracts will be determined by the Steering Committee, however, Ministry staff will manage the projects. Contracts must comply with the requirements of the Ontario Manual of Administration and government policy.

6. Sub-committees and task forces will be established as required by the Steering Committee.

7. Such sub-committees and task forces will make recommendations to the Steering Committee and the Committee will approve or disagree with conclusions or recommendations as it sees fit.

8. The Ministry Chairperson will speak for the Ministry on policy matters and provide the Ministry perspectives on issues discussed.

9. Non-members may attend Steering Committee meetings at the call of the Chair and with the agreement of the Committee.

10. Recommendations and decisions of the Steering Committee will be made available to the public at large for comment. Ministry staff will summarize and analyze comments received.

11. All members of the Steering Committee will receive copies of any submission received from external parties made in response to the recommendations and decisions of the Steering Committee.

12. The members and alternates of the Steering Committee will be appointed by the Minister of Labour in accordance with section 11 of the Act.

13. At the request of the Steering Committee, the Minister of Labour will appoint members of task forces or sub-committees in accordance with section 11 of the Act.

14. Steering Committee members, alternates who attend on behalf of members, as well as members of task forces and sub-committees will be paid reasonable expenses and a fixed per diem in accordance with the Management Board of Cabinet Guidelines (Section 4-1 and Section 6-1 respectively). The per diem for members and alternates will be $110.00. The per diem for the Labour and Employer Vice-chairs will be $150.00.

15. Alternates will attend on behalf of members only when it is impossible for the regular member to attend. Alternates will not be appointed as members to the Steering Committee and must be properly briefed by their member.

16. There will be no ex officio members on the Steering Committee.

17. The Steering Committee will annually review its mandate, membership and effectiveness.

JOINT STEERING COMMITTEE ON HAZARDOUS SUBSTANCES IN THE WORKPLACE

SUPPLEMENTARY PROCESS RULES AGREED TO AT THE NOVEMBER 28, 1989 MEETING

The following rules governing the Steering Committee process are additions to those set out in the Terms of Reference.

1. Task Force Agreements:

- Tentative agreements, confirmed agreements and action items will be recorded in the minutes. The minutes of each Task Force will be written in a consistent manner.
- Agreement will be considered to have been reached when one confirmed set of Task Force minutes has been approved at a subsequent Task Force meeting.
- The agreements reached by a Task Force will be clearly stated in the final report of the Task Force to the Joint Steering Committee for the purpose of ratification by the Joint Steering Committee.
- Where there is a consensus at a Task Force to do so, agreements made will be submitted to the Joint Steering Committee for ratification prior to preparation of a final report.
- Where consensus cannot be achieved by a Task Force in a timely fashion, the issue will be referred to the Joint Steering Committee for a decision.
- The minutes of each meeting will be marked, **"Draft Not Approved"**, before they are distributed after the meeting. Once the draft minutes have been approved at the next meeting of the Task Force any required corrections will be

made and they will be marked,**"Final Minutes, Approved"**.

- When concluding each Task Force meeting the Chair will review with the Task Force the text of any proposed agreements and outstanding action items.

2. ***Facilitating Consensus:***

- A Ministry representative will act as a facilitator for each Task Force and the Joint Steering Committee.
- The Ministry facilitator for each Task Force and the Joint Steering Committee will arrange a conference call with the technical consultants for Labour and the Employers two weeks prior to each Task Force meeting and each meeting of the Joint Steering Committee, to review the proposed agenda and the status of action items.
- At least one Joint Steering Committee member or alternate from each side will be appointed to each Task Force.
- Each Task Force will submit a business plan to the Joint Steering Committee Chair with deadlines for all action items. Each Task Force will be responsible to the Joint Steering Committee for meeting these deadlines.

APPENDIX II

March 28, 1988

JOINT STEERING COMMITTEE ON HAZARDOUS SUBSTANCES IN THE WORKPLACE

Regulation Development Process:

1) The Joint Steering Committee (JSC) determines which substance, agent or class of substances is to be considered for regulation. It prepares a plan and indicates an approximate timetable.

2) A Joint Task Force (JTF) is established by the JSC.

3) With the approval of the JSC, the JTF directs the Program Development Unit (PDU)* to collect and collate information and/or hire a consultant to conduct a background study.

4) The JTF reviews the PDU/consultant report, including the need for a peer review, and recommends action to the JSC. Before engaging outside peer review the JTF will obtain the JSC's approval.

5) The JSC reviews the recommendations of the JTF and can implement a number of alternative steps such as:

(a) if the JTF and the JSC can reach agreement, based on the background report and review, recommend that a Notice of Intent to regulate be published by the Minister.

* On February 5, 1990 PDU was renamed the Health and Safety Regulations Unit, Policy and Regulations Branch.

(b) if the background report is incomplete, request the JTF to engage further studies or investigate shortcomings. This may include directed consultations to solicit further information.

(c) Other Alternatives.

6) (a) The PDU, with the help of the JTF and using the information approved by the JSC, prepares Draft Regulations. Draft Regulation is reviewed by MOL Legal Services Branch. The Ministry of Labour publishes the Draft Regulations after a recommendation from the JSC. Written public comments are invited during a 90–day response period.

(b) Members from the JTF and the JSC hold public hearings at several locations, with the Assistant Deputy Minister of Labour as Chairperson. The hearings are held as soon as possible after the 90–day response period on the Draft Regulations as published in 6 (a). Additional public input will be received for 30 days following the last public hearing.

7) The PDU receives, documents and organizes submissions and comments received from the public during 6 (a) and 6 (b). The JTF and JSC review the public input and recommend changes to the Draft Regulations. An additional period for submission of written comments may be required if substantial changes were made to the Draft Regulations (to be decided on a case–by–case basis).

8) The JSC reviews final Draft Regulations and makes recommendations to the Minister.

9) Final Draft Regulations are reviewed by Legislative Counsel and any changes made are reviewed by the JSC.

APPENDIX III

REGULATORY FRAMEWORK AND CLASSIFICATION TASK FORCE

TERMS OF REFERENCE

Objective:

To develop a regulatory framework for the control of hazardous substances (chemical, physical and biological agents) in the workplace including the scientific criteria for the classification of substances.

Terms of Reference:

1. To define a classification system and the degree of control for hazardous substances within the regulatory framework.

2. To develop a regulatory framework that defines the control requirements for hazardous substances according to their health effects.

To Consider:

a) The standard of proof, the criteria and processes for the classification of hazardous substances.

b) A classification system which determines the type of control program.

c) Toxicological information, including epidemiology, animal bio–assay, mutagenicity testing and chemical composition/structural comparisons, taking into account: quality; quantity; and conflicts.

d) Type of health effect: Chronic vs. acute; Cumulative vs. reversible.

e) Exposure pathways.

f) Mixtures.

g) Substances for which little or no health effects information is available.

h) Control programs including engineering controls, work practices, hygiene practices and facilities, maintenance, record keeping and training, etc.

i) Enforceability.

MEMBERSHIP LIST

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Ms. Linda Jolley
Ontario Federation of Labour

Mr. Colin Lambert
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Westinghouse Canada Inc.

Mr. John Wilson (Chair)
Ministry of Labour

* resigned 1990
** appointed 1990

APPENDIX IV

EXPOSURE VALUES AND LIMITS TASK FORCE

TERMS OF REFERENCE

Objectives:

1. To evaluate the scientific basis for setting exposure values and limits based on time–weighted averages (TWAs).

2. To evaluate the effectiveness and appropriateness of using exposure values and limits based on TWAs to protect worker health and improve the workplace environment.

3. To define the process and criteria for establishing exposure values and limits for hazardous substances (including biological and physical agents) in the workplace.

To be carried out in two stages: *stage one* to meet objectives one and two; *stage two* to meet objective three.

Stage One:

1. To evaluate the scientific basis for using TWAs as the basis for predicting occurrence or absence of health effects.

2. To evaluate the scientific basis for equating constant and uniform exposures of low concentration with intermittent exposures of high concentration.

3. To determine whether the TWA concept makes toxicological and physiological sense.

4. To prepare a draft report within the time frame specified by the Joint Steering Committee.

Stage Two:

1. To review current processes for establishing exposure values and limits in Ontario and other jurisdictions.

2. To determine the role of risk assessment in setting exposure limits.

3. To limit the task to hazardous substances for which toxicological information is available.

4. To limit the task to defining a process and criteria for establishing limits suitable for Ontario, not the setting of exposure limits for any specific substance.

5. To prepare a draft report within the time frame specified by the Joint Steering Committee.

To Consider:

1) Toxicological information: Quality; Quantity; and Conflicts.

2) Exposure pathways.

3) Mixtures.

4) Synergy.

5) No effect level (NOEL).

6) ALARA concept.

7) Enforcement of TWAs (both exposure values and limits).

8) How to deal with technological and economic factors.

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APPENDIX V

REPORT OF THE EXPOSURE VALUES TASK FORCE to the JOINT STEERING COMMITTEE ON HAZARDOUS SUBSTANCES IN THE WORKPLACE

September 1989

Introduction

The Exposure Values and Limits Task Force has carried out discussions over the last several months in accordance with the Objectives and Terms of Reference agreed upon during the Summer of 1988.

We believe that we have resolved the issues outlined in Objectives 1 and 2, and in the Terms of Reference for Stage One. These are listed below for the convenience of the Joint Steering Committee.

Objectives

1. To evaluate the scientific basis for setting exposure values and limits based on time-weighted averages (TWAs).

2. To evaluate the effectiveness and appropriateness of using exposure values and limits based on TWAs to protect worker health and improve the workplace environment.

3. (Still to resolve). Define the process and criteria for establishing exposure values and limits for hazardous substances (including biological and physical agents) in the workplace.

Terms of Reference

To be carried out in two stages: Stage one to meet Objectives 1 and 2; Stage two to meet Objective 3.

Stage One:

1. Evaluate the scientific basis for using TWAs as the basis for predicting occurrence or absence of health effects.

2. Evaluate the scientific basis for equating constant and uniform exposures of low concentration with intermittent exposures of high concentration.

3. Determine whether the TWA concept makes toxicological sense.

4. Prepare a draft report within the time frame specified by the Joint Steering Committee.

Conclusions

For many years when workplace contaminants have been measured, the results have been reported, in most cases, as time-weighted averages (TWAs). For most chemicals it has been assumed on theoretical grounds that the average exposure would provide a valid basis for predicting the occurrence or absence of health effects.

That is, groups of workers with the same average exposure to a hazardous chemical would have the same probability of staying healthy or being adversely affected. It has been assumed that, above some threshold level, workers with higher average exposures would be expected to have a greater risk of ill effects than those with lower average exposures.

Implicit in this use of the TWA is the concept that over some range of concentrations, constant and uniform exposures to toxic substances

have the same effects as variable exposures as long as the average exposure level is the same.

As a result of these assumptions, most workplace exposures have been reported as average values. Peak concentrations to substances are not often measured or reported.

Also, in most scientific experiments designed to test toxic chemicals, laboratory animals are exposed to fairly constant levels of test chemicals. The effects of more variable exposures are not usually tested.

By contrast, many workplaces have quite variable exposures to toxic chemicals, with peak exposure levels much higher than the average exposure level at certain times of the day or year.

In our investigation of this question, we found that there has been little direct testing of the TWA hypothesis. However, several investigators have recently questioned the assumption that TWAs alone provide an adequate form of exposure limit, in particular for acute-acting substances. For these substances it appears that peak concentration is more important than the duration of exposure in determining the effect on health.

Peak exposures are not adequately controlled with TWA-type exposure limits alone; rather, ceilings or maximum exposure limits are more appropriate for controlling peak exposures.

On theoretical grounds the TWA concept reflects risk to health better for chemicals which accumulate in, and are eliminated slowly from the body and cause chronic illness. Though it is widely accepted, there is very little direct experimental evidence to support the TWA concept.

In the absence of such direct experimental evidence, biological half-life should not be the only determinant in setting exposure limits. It cannot be assumed that body burden by itself accurately reflects the toxicological properties of chemicals.

On logical and biological grounds, the TWA concept, if used for regulatory purposes, requires limits to be set to the upward fluctuations of the exposure level.

We are agreed that in setting exposure limits, all the toxicological information available should be considered, and the possibility for both acute and chronic effects should be taken into account. Exposure limits should have adequate documentation, and should reflect consideration of the range of toxicological information available.

Members of the Exposure Values and Limits Task Force

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Colin Lambert
Dan Ublansky

Jennifer Penney (Consultant)

Employer Members

Glenn Weston (Co–chair)
David Gaylor
Roland Hosein
Bruce Waechter

John Murphy (Consultant)

For the Ministry of Labour

Jim Stopps

APPENDIX VI

TASK FORCE ON BIOMEDICAL SURVEILLANCE

TERMS OF REFERENCE

Objectives:

1. To evaluate the appropriateness and effectiveness of biomedical surveillance (which includes health surveillance, health screening and biological monitoring), with respect only to hazardous agents, as part of a regulatory program to protect the health and safety of workers and as a means of improving the workplace environment.

2. Make recommendations for the above.

To Consider:

a) The social and scientific validity of biomedical surveillance and examinations.

b) Mandatory vs. voluntary programs.

c) The role of the co-ordinating physician.

d) Worker right to her/his medical records (issues of ownership and access).

e) Medical confidentiality.

f) The employers' obligation to advise workers of past and present exposures.

g) Payment for examinations, lost time and travel.

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CCL Industries Inc.

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